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Application number: 09/376381

Art Unit: 3628

Applicant: Khai Hee Kwan

Examiner: Debra F Charles.

Title: Method, apparatus and program for pricing, transferring, buying, selling and exercising of freight cargo options on the World Wide Web.

In Chou, the examiner mainly dependent on said to show 'calculation' link to parameters used that are not found in Hunt. Chou's method commonly known as the double auction uses bids and asks submitted by a plurality of cargo transporting entities and shippers independently as the starting point ( Col 2, lines 30-31) within an auction environment to match ask/bids. The first step is to iteratively match the bids to the asks to obtain the maximum number of matches by determining the price ratio being total bid price divided by total asking price. Because the price is calculated based on bid/ask having shipping parameters given by the user, the examiner asserted this reveals pricing a derivative. Even if parameters are evidenced, this by itself does not mean such optimal price for matching will reveal pricing cargo option without more evidence. In this case, the parameters sought by the examiner to show obviousness are used in a different way (matching trades using double auction routine) and for different purposes (calculate optimized bid).

Chou also has no teaching of using a cargo system to provide cargo pricing data. Chou only shows carriers and shippers post bid/ask but said carriers and shippers are not pre-configured cargo system that could determine pricing data output in response to queries. Users/operators are not systems and this is not the case of using a well known manual method to automate it to accomplish the same result (*In re Verner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958)). As we mentioned, our method requires the cargo system to response only when it considers shipping data is suitable and its response is to provide another set of pricing data, no price yet. A manual process such as querying at cargo office would mean the response would be to give a price to the shipping data. For example, a manual process would involve asking a cargo system/operator how much to ship X from A to B and cargo system would response with \$ 40. But in our case, the cargo system provides standard deviation data, loading factor etc which has no meaning to the shipper. Furthermore, there is no known manual method for pricing a cargo option known in the art.

Chou has no teaching to combine with a derivative contract and its pricing mechanism is for the purpose for better match trades utilizing the double auction well known in the art for spot cargo price matching or any type of exchange mechanism with ask/bids prices.

As stated in *In re Zurko*, 111 F.3d 887, 42 USPQ2d 1476 (Fed. Cir. 1997), the nature of the problem cannot be used as motivation when the problem had not been previously identified anywhere in the prior art. The problem in our claim is to determine the price for a cargo option based on said parameters which is not found in Hunt so we respectfully submit that since this problem does not exist in either references, Chou could not possibly motivate one skilled in the art to apply said double auction feature to arrive at pricing a derivative notwithstanding the fact that Hunt taught estimating its derivative.

In Tozzoli et al, the examiner used this to show bank accounts and passwords and fund transfer payable for good and services between two distant business entities common in most trade financing system. Tozzoli does not involve the securing of cargo space or

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cargo options but merely shows electronic flow of shipping documents and automatic payment for a trade transaction system to reduce the cost as per traditional international trade using paper based documents such as LC. Said system used a funder to release funds when documents presented are matched or cargo shipped, similar to a bank being presented with a LC for payment purposes. Tozzoli's invention used bank accounts for payment for real goods and not for cargo spaces.

As per Claim 29, 32, 38, 49, 52, 55

10 As an initial matter, we seek to show that Hunt has no teaching in regards to cargo option. If this is anticipated then, to serve as an anticipating reference, the reference must enable that which it is asserted to anticipate. ("To anticipate the reference must also enable one of skill in the art to make and use the claimed invention."); PPG Industries, Inc. v. Guardian Industries Corp., 75 F.3d 1558, 1566, 37 USPQ2d 1618, 1624 (Fed. Cir. 1996)

15 ("To anticipate a claim, a reference must disclose every element of the challenged claim and enable one skilled in the art to make the anticipating subject matter."). In Elan Pharmaceuticals, Inc. and Athena Neurosciences, Inc. Vs Mayo Foundation for Medical Education and Research, (United States Court of Appeals for the Federal Circuit Case 00-1467, Decided October 2, 2003), the learned judge said "The disclosure in an assertedly

20 anticipating reference must be adequate to enable possession of the desired subject matter. It is insufficient to name or describe the desired subject matter, if it cannot be produced without undue experimentation."

25 Enablement requires that "the prior art reference must teach one of ordinary skill in the art to make or carry out the claimed invention without undue experimentation."  
Minnesota Mining and Manufacturing Co. v. Chemquest, Inc., 303 F.3d 1294, 1301, 64 USPQ2d 1270, 1278 (Fed. Cir. 2002); Enzo Biochem, Inc. v. Calgene, Inc., 188 F.3d 1362, 1369, 52 USPQ2d 1129, 1134 (Fed. Cir. 1999) ("Whether undue experimentation would have been required to make and use an invention, and thus whether a disclosure is

30 enabling under 35 U.S.C. §112, ¶1, is a question of law that we review de novo, based on underlying factual inquiries that we review for clear error."). It is clear in Hunt that he did not teach cargo option as well had explicitly defined his derivative to be a future/forward by estimating its future value.

35 The next question is whether one skill in the art of cargo space risk in view of Hunt is able to read cargo options when only cargo forward or future contract is taught. Or alternatively, is cargo option inherent in reading cargo forward contracts ?

40 Inherency cannot be established by probabilities or possibilities. The mere fact that a certain thing (cargo option) may result from a given set of circumstances is not sufficient such as by referencing derivatives. (In re Oelrich, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981) (quoting Hansgird V Kemmer, 102 F.2d 212, 214, 40 USPQ 665, 667

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(CCPA 1939)) (emphasis added). Thus, inherency permits in limited circumstances, to gap minor but well known features or functions as seen by one skilled in the art.

5 An inherent disclosure, to be invalidating as an "anticipation," is a disclosure that is necessarily contained in the prior art, and would be so recognized by a person of ordinary skill in that art. *Continental Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 1268-69, 20 USPQ2d 1746, 1749-50 (Fed. Cir. 1991). "Inherency" charges the inventor with knowledge that would be known to the art, although not described. Inherency is not a matter of hindsight based on the applicant's disclosure: the missing claim elements must  
10 necessarily be present in the prior art. However, there is nothing in the financial art suggesting cargo option known to one skilled in said art.

Furthermore, there is no explanation and the examiner has unstatedly assume that since 'cargo option' is a derivative and Hunt teaches derivatives and hence include all types  
15 known and unknown would inherently reveal cargo option as viewed by one skilled in the art. However, we find Hunt's own unique definition of its derivative "A derivative is defined as a financial instrument whose value is based on the perceived future collective value of a breadbasket of primary instrument" ( Col 5, line 33-35) fatal to the examiner's unstated assumption. In this case, Hunt has adopted a specific meaning hence explicitly  
20 narrowing it to futures/forward contracts. Our cargo option's price could not be based on "perceived future value" as taught by Hunt and neither can one skilled in the art read anything but futures/forward contracts reading Hunt's definition. A cargo option's price is based on a number of parameters as calculated per our specification to reflect the cost of its non-obligatory feature distinguishing Hunt's obligatory feature for value of future  
25 contract. There is no 'cost' in a future contract as it is obligatory and its value is the contracted future value based on estimating from its present value. See *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1255-57, 9 USPQ2d 1962, 1965-66 (Fed. Cir. 1989) ("To read the claim in light of the specification indiscriminately to cover all types of optical fibers would be divorced from reality.")

30 In general, financial options price is based on replicating the cost of carrying the commodity and cash and not perceived future value. (See John C Cox, Stephen A Ross and Mark Rubinstein, "Option pricing: A Simplified Approach," *Journal of Financial Economics* 7, No 3 ( Sept 1979) pp 229-263). A discussion on differences between  
35 financial options and futures application can be found in Eugene Moriarty, Susan Phillips and Paula Tesini, "A comparison of Options and Futures in the Management of Portfolio Risk," *Financial Analysts Journal* ( Jan/Feb 1981). Note these are financial options not cargo options.

40 Therefore, we must respectfully submit that Hunt does not anticipate explicitly or inherently to our cargo option element and his definition in effect explicitly narrows to cargo future and forward contracts. And as such we will now consider obviousness determination which must include a motivation to modify.

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Obviousness determination.

A claimed invention is unpatentable due to obviousness if the differences between it and the prior art "are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103(a) (2000).

The examiner's unstated view is that the "derivative" link between a cargo forward or futures in Hunt and its variations via financial options would render cargo option obvious when option is known to one skilled in the art. We respectfully reject such proposition given the explicit meaning found in 'derivative' as taught by Hunt and financial option has no teaching of cargo options nor any teaching to combine each other features found. No motivation has been evidenced either by the examiner required for obviousness determination.

In effect, this amounts to a rejection based on the Hunt reference alone. Even so basing on a single reference, a motivation must be articulated. See *B.F. Goodrich v. Aircraft Braking Sys. Corp.*, 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed. Cir. 1996) (motivation to modify a single reference). Here there is absolutely nothing in Hunt to even suggest such modification in particular why to modify an obligatory contract to one which is non-obligatory found in cargo option. The examiner offered no evidence suggesting what might have led an ordinary artisan in this field to modify from obligatory feature found in a futures or forward contract to one of non-obligatory to establish prima facie. Stated simply, knowing options exist does not charge one skilled in the art to cargo options from forward/futures contract without some motivation.

Hunt actually did not articulate whether it is a futures or forward and appears to use them interchangeably given their minor differences as seen in the financial art. However, since Hunt teach of netting credits and debits ( Hunt Col 12, lines 32-36) as well as requiring capital advance ( Hunt Col 11, line 40-55), we can speculate it is more likely to be a future contract common in an exchange environment where contracts are standardized to allow easy trading and setoffs with the net differences being credited or debited. The capital advance is to enforce its obligatory feature by carrier commonly known as deposit or performance bond well known in the art of financial exchanges. However, capital advanced is not the same as payment in recognizing a purchase for acquiring cargo option.

"[t]he consistent criterion for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this process should be carried out and would have a reasonable likelihood of success, viewed in the light of the prior art." *In re Dow Chem.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988).

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The first requirement is that a showing of a suggestion, teaching, or motivation to combine the prior art references is an "essential evidentiary component of an obviousness holding." C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). This evidence may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved. See Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996).

As we mentioned Hunt strictly defined his derivative to be a future/forward and no teaching about cargo options nor the pricing of said. There is no evidence shown by the examiner that one skilled in the art of financial option would necessarily be able to reach cargo option in view of cargo futures.

It is well known that by itself, financial options has no suggestion flowing to cargo options. This can be supported similarly where there is no evidence to show financial futures or forwards would fairly teach flowing to cargo futures or forwards, else the latter would render Hunt's patent invalid. No evidence has been shown to support any suggestion to combine Hunt's feature and financial option.

It is also well known in the financial art, despite being in the same family " derivative " the differences between futures to options is significant given the opposite nature of both obligatory and non-obligatory features. Also, see derivative such as swap or swaption which is a hybrid exhibiting different features or functions.

In this case the difference is not minor but significant. In re Chu, 66 F.3d 292, 298, 36 USPQ2d 1089, 1094 (Fed. Cir. 1995) (stating that even when changes from the prior art are "minor" or "simple," an inquiry must be made as to whether "the prior art provides any teaching or suggestion to one of ordinary skill in the art to make the changes" (quoting Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 935, 15 USPQ2d 1321, 1324 (Fed. Cir. 1990))).

In Pro-Mold, the nature of the problem reveal the solution does not fit in our case. In particular, there is no problem or hint in Hunt's forward contract that would lead one to consider cargo option. Hunt provides a solution to lock in estimated future/forward rate while our claim is to provide an option to lock a future rate, period. Apex Inc. v. Raritan Computer, Inc., 325 F.3d 1364, 1373 (Fed. Cir. 2003) ("[C]laims are interpreted in light of the specification and with the knowledge of one of ordinary skill in the art."); Vitronics, 90 F.3d at 1582.

It may be true that, knowing the general meaning of financial derivative, one can use the teaching to hypothesize reaching cargo option and that one has the potential for arriving at such as claimed with hindsight. But financial derivatives also includes many variations or possibilities including but not limited : swaps, warrants, digital options, interest rate

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swaps, caps, floors, forward rate agreements (FRA), interest rate basis swaps, interest rate options, switches, FX options, weather options (US Pat 6,418,417), barrier options, quanto options, average option, basket option, chooser option, compound option, contingent premium option, lookback option, rainbow option, ratchet option or hybrids such as swap options, at-the-money forward option (ATM) or frozen orange juice futures, coffee futures etc" well known in the art. In fact any combination or permutation is possible including cargo swaps, cargo warrants, weather swaps etc. We speculate that for the same reason that derivative having various permutations lead Hunt to expressly defined his own derivative to afford patentability.

Even if one skilled in the art would be able to name a derivative such as cargo option, that is not sufficient when there is no evidence found above to assume one skilled in the art can reach the unknown 'cargo option'. See *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed.Cir.1983) ("To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher."). Skill in the art does not act as a bridge over gaps in substantive presentation of an obviousness case, but instead supplies the primary guarantee of objectivity in the process. See *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718, 21 USPQ2d 1053, 1057 (Fed.Cir.1991). Therefore, given the many number of permutations, the failure of the cited prior art in Hunt to even suggest modification, Hunt's own definition of derivative and the examiner's failure to at least provide a motivation, we must submit the claimed subject matter would not have been obvious reading the claim as a whole. The pertinent question is why would Hunt want his obligatory cargo contracts to be non-obligatory, completely destroying his novelty to lock future cargo rates and to harvest the benefits of able to contra not found in cargo options.

The second requirement is that the ultimate determination of obviousness "does not require absolute predictability of success. . . . [A]ll that is required is a reasonable expectation of success." *In re O'Farrell*, 853 F.2d 894, 903-904, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988); see also *In re Longi*, 759 F.2d 887, 897, 225 USPQ 645, 651-52 (Fed. Cir. 1985). Given there is nothing to teach modifying a cargo forward contract to one of an option contract and hence there is no question on reasonable expectation of success as providing an non obligatory feature was never identified or revealed in Hunt.

Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. In *re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). However, we noted Hunt has no teaching of a cargo system and the examiner had not provided any evidence to show this missing element. Similarly nothing is shown for the limitation 'in response' to shipping data to show cargo pricing data. These are not independently posted to be matched as in Hunt's Ask/Bid by shipper and carrier.

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In this case, the Examiner may have fell into the hindsight trap. The idea of an option contract for cargo space, as opposed to cargo forward or futures contracts, is a simple concept but simplicity alone is not dispositive to patentability. With this simple concept in mind and knowing that in general derivative includes options, the examiner found prior art describing "derivative" that in the abstract appeared to suggest the claimed limitation. But, there was no finding as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of applicant's invention to make the modification in the manner claimed. Specifically Hunt teach his derivative to be futures/forward contracts and there was no teaching suggesting cargo option in Hunt or problem to reveal the need for non-obligatory contracts and the examiner had used hindsight to gap with the unknown. We submit that the Examiner did not make out a proper prima facie case of obviousness under 35 U.S.C. § 103(a) over Hunt and Applicant respectfully submits that claims 29,32,38,49,52,55 are patentable over Hunt.

In ending, we present a Summary between our claimed cargo option and hunt's teachings is illustrated below for easy referencing.

Hunt's derivative is defined as "a financial instrument whose value is based on the perceived future collective value of a breadbasket of primary instruments."	Cargo option's value is not based on perceived future collective value of a breadbasket of primary instrument.
Provides a right and obligation (obligatory feature)	Provides a right but not an obligation (non obligatory feature)
No acquisition price. The contract is per value of contract payable at the end of period or not off.	Contract has an acquisition price (option price or price to acquire contract) and remaining payment (for contract value).
Cash Flow for Futures/Forward Contract.  According to Hunt, said teaches netting of differences by credit or debit and post billings ( Fig 6B). Hunt also teaches capital advancement which we believe to mean a percentage of the full contract value is advanced to seller/carrier on contract. Hunt did not teach how this advancement is done or by whom but given its an exchange, we believe that	Option contracts must be acquired by payment consideration and not advancement (debit and credit).  The distinction between advancing an amount and paying for something must be clear as the latter carries title and equity which gives him this non-obligatory feature not found in futures contract. There is no further margin calls throughout the period.



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<p>this advancement is done by crediting carrier and debiting buyer using book entry methods but without actual money being paid until end of period whereby the net is applied. Typically, this advancement would be marked against buyer's deposits by the clearing house or exchange on a daily rest basis. An advancement is not the same as payment consideration to acquire a contract as per our cargo option and is common in the deposit margin system to ensure future obligations are met when due.</p> <p>Future contracts traded in financial exchanges are usually setoff with the differences being paid without physical delivery.</p>	<p>The price of the option is to secure the contract for value as remaining payment. See example below.</p> <p>Futures Contract: Buy value at 50 and sell at 60 hence by contra, the difference of 10 is received.</p> <p>Options Contract: Say priced at 10, user has to pay 10 first to acquire the contract for value 50. This means the user has to decide whether to pay 50 to secure cargo space later. User need not contra to setoff its obligations as option is non obligatory. If contract is value 60 at the end, user will pay 50 effectively means outflow of 60 (50+10 initial) as compared to User in futures receiving 10.</p>
<p>Common descriptive SEU linked between varied commodity types: 1) start date and finish date 2) geographic region 3) mode of transportation 4) a value per unit of measure.</p> <p>In short, as a future contract say based on SEU where the future value is an <u>estimation of its calculated SEU present value.</u></p>	<p>Parameters are used selectively to calculate option price to secure underlying cargo space with a specific carrier.</p> <p>Program to <u>calculate cargo option price</u> incorporating at least one parameter.</p>
<p>Input devices like PC but no cargo systems</p>	<p>Automated Cargo systems to provide pricing data if available</p>
<p>Auction routine with bid/ask in exchange environment using RDB to match.</p>	<p>Other than Claim 29 and dependents where users can offer <u>secondary cargo options</u> in exchange environment, otherwise user cannot bid the output <u>primary cargo option price</u>. User can only accept or reject. <u>No auction routine at all even in exchange environment.</u></p>

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**The motivation to combine with Chou ?**

The examiner stated "The motivation to combine these references is Hunt et al describes the converting of the bid into a priced contract derivative while Chou et al details the method used by the computer to arrive at the price based on multiple parameters. It would be obvious to combine these two references and get the applicant's invention because one deals with the pricing calculations and the other deals with the contract as a derivative reflecting the pricing calculations."

We respectfully submit that such suggestion is not found in either references. First while Hunt describes the 'converting' of a bid into a priced contract derivative, it teaches using an estimation method 'estimating future value' ( Col 11, line 36) from its present value which is totally incompatible with a calculative means. Secondly, there is no teaching of "derivative reflecting the pricing calculation" in Hunt. Hunt teaches its future's value as an estimate based on calculated present value of SEU by category, the latter is NOT a derivative. (Col 11, lines 20-39). In short, SEU is calculated but its derivative is one estimated from its calculated present value of SEU.

By combining with Chou, this must necessarily depart from Hunt's original teaching to accommodate Chou's calculative needs with said missing parameters. No evidence has been shown to reveal its desirability nor is it known in the art to do so. Even if it is desirable to do so absent of any problem with Hunt's estimation means, there must be sound principle backing the use of a double auction routine method using said parameters to reveal its advantages over 'estimating' means for pricing futures. None has been evidenced here.

Therefore, we cannot accept the examiner's suggestion to disregard Hunt's teaching by substituting what is known in other financial arts but not relevant to cargo forwards/futures, in short substituting Hunt's teaching with hindsight. Furthermore, there is no convincing evidence to show that while calculating is known in options, calculation would also work in cargo forwards or futures. For example, in Swaps, which is another major branch of derivative there is no calculating and its simple agreement to swap the borrowing rates cash flow.

Thirdly turning to Chou, the issue is not merely identifying said calculative feature cum missing parameters but why is it desirable to one skilled in the art to modify to calculate from estimating ? The examiner has not stated the desirability but merely expressed the features cum parameters found in said prior arts seemingly complimenting what is missing to reach our claimed invention. In re Werner Kotzab, 217 F.3d 1365,1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) "[A] rejection cannot be predicated on the mere identification... of individual components of claimed limitations. Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the

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claimed invention, would have selected these components for combination in the manner claimed.").

5 Stated differently, because we have derivatives contracts reflect pricing calculation then  
its obvious to combine with one that deals with pricing calculation cum parameters since  
this subject matter is lacking in the first prior art showing derivative. This is stating in  
hindsight form matters more than substance which is not sound particularly involving  
specific cargo option calculating results. See Grain Processing Corp. v. American Maize-  
10 Products Co., 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988) ("Care must be  
taken to avoid hindsight reconstruction by using 'the patent in suit as a guide through the  
maze of prior art references, combining the right references in the right way so as to  
achieve the result of the claims in suit.'")

15 The motivation cited is also too general and conclusory as it could mean any prior art that  
deals with pricing calculation can said parameters would be combinable including one  
that deals mathematically with double auction routine as in Chou. This is unsound as one  
skilled in the art would surely see the inapplicability of such mathematical routine in Chou  
in respect of determining a forward/future price in Hunt. Stated differently by calculating  
the optimal bid from a range of bids/asks, how would one skilled in the art conclude this  
20 is a price for a particular future contract ?

Chou needs a range of bids/asks to calculate and if Hunt has no starting estimation for its  
bid/ask, Chou would not work. But the examiner is asserting that Chou will provide a  
price for Hunt's derivative using said parameters being the motivation to combine to  
25 show the parameters. In Chou, the calculated optimal bid tells the system that this price  
will maximize trade matches for the next round of incoming bids so the system is more  
efficient in matching trades knowing where to look. This begs the question what is the  
relationship, if any between the optimal bid price as determined from a range ask/bid  
future contract price to pricing a futures contract making it desirable. There is no  
30 mathematics or scientific explanation or any basis at all to support this motivation to  
combine with a double auction routine to conclude an optimal price as a price for cargo  
futures contract. There is no teaching at all in the general financial art to show a double  
auction method can price financial forward contract estimated bid/ask prices into one of a  
financial option contract price. Therefore, said motivation also does not address why this  
35 specific proposed modification would be obvious when nothing in them actually teach to  
reach pricing cargo options.

Chou's method also fail to meet our claimed method, as mentioned because Chou's  
routine works in an exchange to match trades, Chou requires multiple bid and ask  
40 whereby each consisting a set of parametric data being submitted over discrete time. As  
mentioned, while we claimed an exchange in 29, the pricing method is still used for  
primary cargo options. Only secondary cargo options which are priced are posted for  
exchange purposes. We only need one set of parametric data to enable our calculation at

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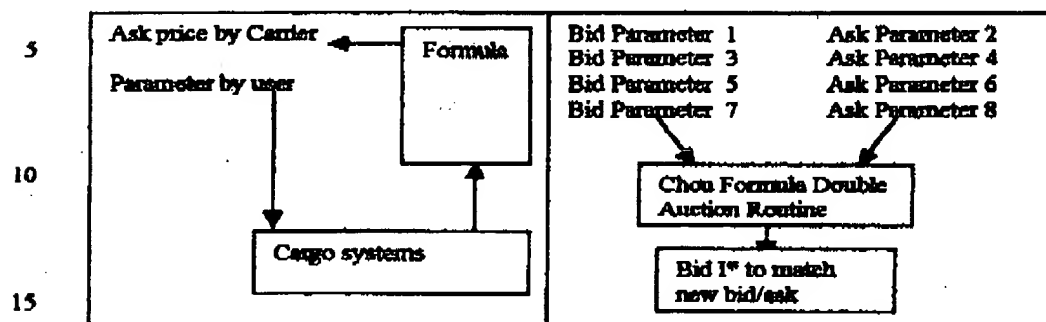
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one point in time. It is unlikely Chou would be able to produce an optimal bid price using one set of parametric data. (See below)



Chou only described arriving at a price based on posted cargo spot price but nothing in Chou teach this price as a cargo option price nor one of a forward price. In fact, it's the optimal  $I^*$  price is for matching posted bid and ask for a spot cargo rate exchange. It is well known in the art that spot price (present value) is not equivalent to forward or option price. For the same reason Hunt teaches estimating its future value from its present value.

Chou's 'calculation' method is merely one exemplifying a discrete time double auction well known in the art to be inapplicable to cargo option calculation as per our claim ( See Chou Claim 1). And even if both references are combinable, one can only reach matching forward contracts optimally by a double auction process in lieu of RDB (col 8 line 14) as taught by Hunt. The novelty in Chou is applying said process to better match cargo spot bid/ask and as mentioned in Chou, the method of double auction is applicable in other exchanges such as NYSE to better match trades. Certainly, we cannot accept that a routine used for determining an optimal price to match trades could somehow be transformed to pricing a derivative given the only evidence is by identifying some parameters used in said routine.

By suggesting to combine with Chou, this also indirectly implied that the examiner admitted that Hunt's derivative could not be include cargo option as this claimed 'derivative' requires more than estimating of its future value found in Hunt. And because there is a difference and the examiner did not articulate this difference to show obviousness, prima facie is not shown in view of Hunt.

Furthermore, nothing in Chou address cargo pricing data (demand, weather, standard deviation) from cargo system wherein in response on shipping data including remaining payment as this 'cargo system' element is also missing in Chou and Hunt. As we mentioned, our cargo pricing data is in response to shipping data. They are not

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independently posted to be matched as in Chou's Ask/Bid by shipper and carrier. To show obviousness, all elements must be found in said combination.

5 Lastly, we also submit neither Chou nor Hunt includes any suggestion to combine its features with the features of the other reference. According, for the reasons identified above, Applicant respectfully submits that claims 29,32,38,49,52,55 are patentable over Hunt in view of Chou.

10 The motivation to combine with Tozzoli ?

The examiner stated that " the motivation to combine these references is Hunt et al describes the database connected to a controller but Tozzoli et al describes the bank and payment details that are part of the user's account profile. "

15 We respectfully disagree. As an initial matter there is no teaching in Hunt to combine with Tozzoli's bank and payment as part of user account details being in two different arts, Hunt for future contracts employing a contra settlement and Tozzoli reflecting a trade system to promote payment between two distant entities for goods shipped. Even if a database could contain such user data, the desirability to combine cannot be conclusory dealt by suggesting employing the missing features.

20 The question is why is it desirable to combine a database with user account profile in view of a trade finance system ? There is nothing in Tozzoli dealing with locking cargo space rates using options or paying for said space using cargo options. Tozzoli also failed to show transaction record for cargo option, cargo prices, type of cargo, transporter, departure destination as per Claim 29 as part of account details.

25 There is nothing in Tozzoli to use cargo option contracts as LC in lieu or capable of accepting said for payment or delivery purposes. In fact without further teaching, this would suggest any prior art dealing with payment, bank accounts, password as part of user account would necessarily fit this combination. The motivation provided does not address the need to combine.

30 As the examiner stated " Tozzoli describes the bank and payment details that are part of the user's account profile" without more is not a sound motivation. The fact that a database can store such information does not mean it is desirable to do so as any alternatives in Hunt could easily accommodate such need. For example, instead of having these data in database at host, user simply connect to bank to self initiate a fund transfer to seller. Our requirement for having this data stored in host server as we also claimed registered users in preamble of Claim 29. With an Exchange the identities of the users (particularly buyers) may be anonymous since the host is transacting the payment between them (user to user or user to carrier). In trade finance system both buyer and

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seller are known to each other as the buyer must surely know who to pay in a normal goods transaction. For example an LC is open in favor of a known designated party.

5 Hunt teaches debit and credit book entries at step 254 (Col 12, Line 32 to 36) which promotes a post billing system common in most futures exchanges and a step 230 for capital advancement ( Col 11, line 40). In contrast, our cargo options and remaining payment have to be paid to acquire option contract and cargo space in real time. Why would Hunt desire a real time payment system when it promoted debits/credits book entry and contra ? The teaching of capital advanced as mentioned is not equivalent to paying  
10 for the contract value or to secure the contract. The amount advanced is merely to enforce obligatory feature. ( Hunt Col 11 lines 40-45)

15 This 'contra' mechanism also could not be properly combine with a funder mechanism in Tozzoli applying LC and Bill of Lading. There is no known way to contra a LC or Bill of Lading known.

20 We submit that even if all said elements are found in Tozzoli and may be incorporated in a database by itself does not necessarily means its combination would be obvious without some teaching or motivation and hence desirability in view to Hunt and Tozzoli to combine said each other features to reveal the claim as a whole in facilitating acquisition of cargo options and using cargo options to settle remaining payment to take delivery of cargo space, which functions differently as taught in Tozzoli or in Hunt respectively. In re Stencel, 828 F.2d 751, 754-55, 4 USPQ2d 1071, 1073 (Fed. Cir. 1987) (function stated in claim distinguishes from prior art).

25 According, for the reasons identified above, Applicant respectfully submits that claims 29,32,38,49,52,55 are patentable over Hunt in view of Tozzoli.

30 As per Claim 29.

35 As an initial matter the preamble would fairly suggest this invention is directed to a cargo option exchange and not one for a future/forward cargo contract as in Hunt. See In re Stencel, 828 F.2d 751, 754, 4 USPQ2d 1071, 1073 (Fed. Cir. 1987) (the preamble is interpreted in light of the invention as a whole); Perkin- Elmer Corp. v. Computervision Corp., 732 F.2d 888, 896, 221 USPQ 669, 675 (Fed. Cir.), cert. denied, 469 U.S. 857 (1984) (the limitations stated in the preamble give meaning to the claim and can serve to define the invention).

40 This claim discloses an interactive electronic cargo option exchange and elements for pricing said cargo option on offer, reading the claim as a whole which is not obvious to Hunt's forward contract exchange. A claimed invention is unpatentable as obvious "if the

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5 differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103(a) (1994); see *Dembiczak*, 175 F.3d at 998, 50 USPQ2d at 1616. As mentioned, the examiner did not reason how one skilled in the art would consider the subject matter as a whole would be obvious when there is no teaching or specific teaching that it is for Future/Forwards contracts.

10 The exchange is also connected to a plurality of cargo systems whereby said system determines whether to offer a cargo pricing data upon receiving a shipping request from an user, whereby said options are priced by central controller with cargo pricing information from cargo system wishing to offer. Note cargo pricing information is not necessarily the same as shipping information. Cargo pricing information is from cargo system based on user's shipping information. Both cargo and shipping information are  
15 needed to determining option pricing. Both said information are not for matching a bid and offer as in Hunt nor Chou which are posted independently to await matching. And because these derivatives are already priced by estimation there is no suggestion to calculate the price for said in Hunt.

20 In Hunt, there is no teaching of the central controller 12 being connected to at least one cargo system. In Fig 2 of Hunt, it shows a PC used to port data to 12. In point 20 known as the derivative exchange point is where the trading of a derivative between a derivative owner and a derivative purchaser is entered into the system. The pertinent question is whether this PC can inherently show a cargo system? The examiner provided no reasons  
25 to show that one skilled in the art in view of the PC in Hunt will reveal a cargo system. More importantly this cargo system is pre-configured to receive shipping information, determine service availability and responding by providing cargo pricing information to central controller to enable the latter to calculate the option or asking price.

30 Even if a general PC is capable of performing all the tasks claimed there must be teaching in Hunt to inherently shows it can be programmed for determining cargo pricing data. Similarly there is nothing in Chou to show a cargo system only that participants are carriers such as railroads, companies etc ( Chou Col 5 line 1-15). If it is obvious then there must be motivation and hence desirability to modify. No motivation is evidenced by  
35 the examiner to show a cargo system and mere operators or users of the system in the cargo business could not be cargo system.

40 The examiner asserted that a program is clearly performing the query activity and provided Hunt Col 8, lines 5-col 12 line 30 as evidenced. However this query is done at 12 and not as in our claim at the cargo system as mentioned in Hunt Col 9 line 34 or step 162. In Hunt, all the 'commodities' are inputted into 12 ready for matching which requires some query program such as RDB is obvious. In our claim as below, all the data

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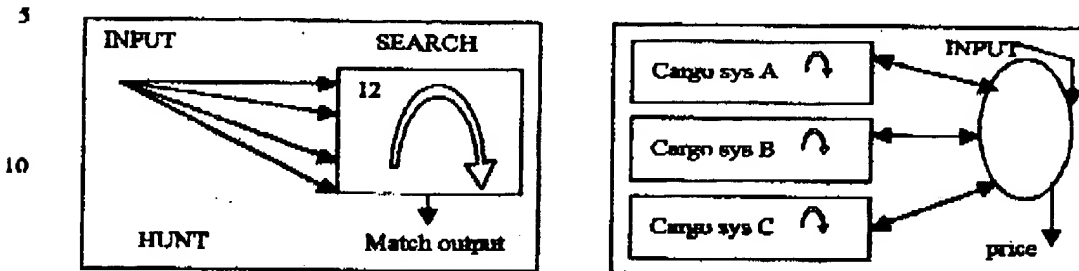
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are stored in individual cargo system and the query is done at said system depending on the chosen parameters. They are not 'input' for sale as in Hunt's exchange.



- 15 Therefore, we submit structurally this does not meet our claimed element in cargo system wherein response by querying shipping data to reveal cargo pricing data at each cargo system.

- 20 The examiner used Chou to show elements: cargo shipping information ; cargo system calculating means; cargo system determine availability of service; responding cargo pricing means; program to calculate cargo option price and querying at least one cargo system. ( Note we have simplified the elements from the claim 29)

- 25 As an initial matter even in an obviousness determination all elements must be found inherently or explicitly by combining. As there is no cargo system in either Hunt and Chou and hence all elements such as " in response to shipping data " connected thereto said are respectfully patentable. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

- 30 Chou uses parameters similar to shipping information and a double auction routine to match bid/ask but no cargo pricing data in response to shipping data by cargo system. There is nothing in Chou that suggests calculating a cargo option price and Hunt certainly did not show this as said advocate using estimation for its futures contracts. In short, Chou's bid price is one that optimize matches in an auction environment, stores this value and wait for the next batch of bids/offers hence double auction. ( See Chou Col 5 line 1
- 35 where it says " carries out by computer implementation a double auction type trade building, ..." ) Also see Claim 2 at Col 17 detailing selecting the bid and double auction process in Claim 1 of Chou. And because it is not calculating an option price, elements such as remaining payment, base price, standard deviation of cargo service price are not appreciated. For example, in Chou the bid record shows volume or weight, shipping
- 40 origin, destination, departure window, arrival time window and a bid price ( Chou Col 3, lines 1-7) also see ( Chou Col 5 line 50 to Col 6 line 5). An option price is merely the premium to acquire an option for a particular price and said premium while reflecting the value, it is not the value for contract as in Chou (Chou Col 5 line 50- Col 6 line 5 for



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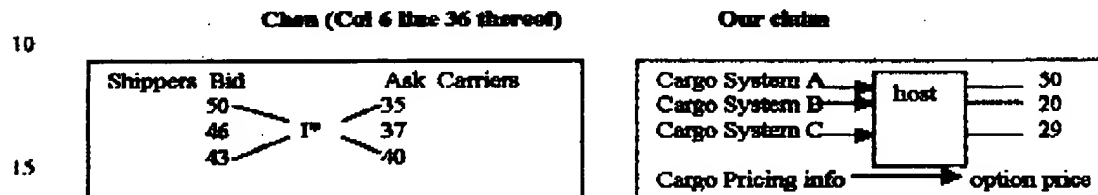
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example Ask price per unit load, per mile travel in the route) and Hunt (See steps 226,228,230 of Fig 6A for example SEU determined by category).

As mentioned Chou process requires bids and asks to be submitted first to determine I\* which is not found in our cargo option calculation as said is calculated from cargo pricing information submitted from individual responding cargo systems shown in arrow below to host controller. See below



Chou's method is actually designed to find the optimal matches between ask and bid based on multiple parameters within an auction system. It does not arrive at a price directly but rather 'test' all the bids first for time window feasibility and capacity feasibility and finally compare it against price feasibility herein named executables. As mentioned this is the objective of 1-PSIB is to insert as many bids are possible into the route while still having executability ( Col 11, line 55-58)

The fact that Chou identifies a bid price that optimize trade matches within an auction routine by itself does not reveal our option calculation method for cargo space hence one skilled in the art would not find it desirable to combine. As stated in *Fromson V Advance Offset Plate Inc*, 755 F.2d 1549, 1556, 225 USPQ 26, 31 ( Fed Cir 1985) ( the prior art must suggest to one of ordinary skill in the art the desirability of the claimed combination).

We respectfully submit that given one skilled in the art would recognize Chou's method is not for calculating a derivative price would not find it desirable to combine given what is known about double auction routine. There is a significant difference in finding an optimal price to match trades as in Chou vs determining a forward/future price clearly not inter-changeable.

The examiner continued by placing on record that one skilled in the art would be motivated to combine Hunt which describes the converting of a bid into a priced contract derivative while Chou details method used by the computer to arrive at the price based on multiple different parameters because one deals with pricing calculation and the other deals with the contract as derivative reflecting the pricing calculations. We respectfully disagree.

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5 This showing must be clear and particular, and broad conclusory statements about teaching of multiple references dealing with pricing calculation, standing alone, are not "evidence." See *Dembiczak*, 175 F.3d at 1000, 50 USPQ2d at 1617. Why would Hunt want another method to price its derivative when it is already priced forward albeit not match optimally? Hunt already teaches using RDB at step 184 (Col 8, line 13) The fact that Hunt lacks a calculating method using various parameters (as in Chou) in its pricing does not reveal it is desirable to combine without able to reconcile with Hunt's teaching for estimating future value as its preferred derivative pricing method. Chou does not even suggest calculating forward or futures prices for cargo space.

10 We therefore submit that the one skilled in the art would not have combine with Chou in view of Hunt and even if one is to combine said pricing method the resultant would not reach cargo option pricing. In addition, we also submit our previous detail discussion on Motivation to combine with Chou at page 10 to be instructive and incorporated herein.

15 Turning to the last section in view of Tozzoli to reveal database with cargo prices, personal details, type of cargo etc, please refer to our motivation to combine with Tozzoli at page 13 above.

20 As per claim 32

25 This rejection is respectfully traversed. As an initial matter, this claim is not an exchange as per Claim 29. Hunt is an exchange where bid/ask prices are matched. In this claim, it simply receive cargo pricing information and output a cargo option price without a need for matching as in Hunt. Our user simply accept or reject. In Hunt the contracts are offered through an exchange mechanism and are posted independently to await matches. In short, our user cannot offer a counter price or bid price to be matched.

30 As we mentioned above in Claim 29, Hunt in view of Chou did not show a program to calculate cargo option price within an exchange environment. And neither did the examiner reason how a cargo forward/futures contract in Hunt will inherently shows a cargo option contract nor that Chou's double auction routine to arrive at a bid price will inherently show a cargo option price. At the very minimum, there must be a showing that there is some inherent relationship or mathematics principle in a double auction routine to show a cargo option price, hence the desirability to combine.

35 Furthermore, this is a put cargo option whereby the carrier has a right to sell but not an obligation at a price determined by the cargo system. And because this is a request by cargo system, this element is also not found in Hunt or Chou. As we mentioned there is a difference between a cargo system and a general PC in Fig 2 in Hunt which is used mainly for input and output point by operator.

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As the elements of cargo option, calculating cargo option and cargo system are missing from Hunt in view of Chou and there is no teaching to combine each other references found in either Hunt or Chou, we respectfully submit that this claim be patentable over Hunt in view of Chou. In addition, we also submit our previous detail discussion on Motivation to combine with Chou at page 10 to be instructive and incorporated herein.

As per claim 38

This rejection is respectfully traversed. As an initial matter, this claim is not an exchange as per Claim 29. Hunt is an exchange where bid/ask prices are matched.

This claim differs from 29 in one respect which was not prosecuted by the examiner and that is the option and its calculated price must be made available to the first user for consideration first and if rejected then its available to others (exclusively factor for first user).

There is no teaching in Hunt in regard to this element and Hunt provided all offers to be inputted and listed for all as per a normal exchange to be matched without first exclusively period to a specific user.

Hunt's teaching is one for a future contract and does not inherently shows a cargo option without more. To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference; and that it would be so recognized by persons of ordinary skill." *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991).

"Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *Id.* at 1269, 20 U.S.P.Q.2d at 1749 (quoting *In re Oelrich*, 666 F.2d 578, 581, 212 U.S.P.Q. 323, 326 (C.C.P.A. 1981)). As we said while one skilled in the art would recognize options in financial derivative, the same may not be for cargo options as claimed. Further discussion on rebutting obviousness in view of Hunt can be found in page 5 under

Obviousness determination.

Furthermore, Chou's calculation does not reveal one for option pricing or stated differently there is no sound principle to show a double auction will inherently show pricing futures cargo prices or options. There is no teaching in Hunt to combine with Chou to show calculating a cargo option price and as mentioned Hunt teaches estimating future value for its derivative. This means there is nothing to show combining with each other features as suggested by the examiner. Our previous detail discussion on Motivation to combine with Chou at page 10 incorporated herein.

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We therefore submit in addition to our reasons in Claim 29 that cargo system element is not meet, hence this claim is patentable over Hunt in view of Chou.

5 However without conceding the examiner's assertion, we have amended this claim to be broader incorporating all said rebutted elements. We noted that the existing claims may be too narrow.

10 As per claim 49

This rejection is respectfully traversed. As an initial matter, this claim has no limitation for an exchange as per Claim 29. In Hunt the contracts are offered through an exchange mechanism ( Col 3 line 15) requiring bid/offers to be matched. In this method claim,  
15 controller simply receives cargo pricing information and output a cargo option price without a need for matching as in Hunt. In short, we claimed a method to calculate price not matching of bid/ask.

20 In addition to no evidence to show cargo option, there is no teaching in Hunt for a cargo system capable of determining the suitability of shipping information so to provide a response by querying shipping data to cargo pricing data at each cargo system. Hunt actually teaches querying itself based on the transportation database for matching. See Col 9, lines 33-38.

25 In combining with Chou to show calculation cum parameters, we submit our previous detailed rebuttal in motivation to combine with Chou at page 10 under claim 29.

30 In combining with Tozzoli to show bank accounts, we submit our previous rebuttal in motivation to combine with Tozzoli at page 13 under claim 29.

However without conceding to the examiner's argument, we have also deleted the elements relating to Tozzoli to make it even broader as we find the same elements being repeated in other claims such as Claim 29.

35 As per claim 52

This rejection is respectfully traversed.

40 As this claim is of a different class to claim 49, we submit our rebuttal as per 49 above.

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As per claim 55

This rejection is respectfully traversed.

- 5 As this claim is of a different class to claim 32, we submit our rebuttal as per 32 above.

As per Claim 30

This rejection is respectfully traversed.

10

In claim 30 which is dependent on Claim 29, the examiner asserted that Tozzoli teach the funds transfer, bank accounts and password protection but without more the motivation is not sound. The examiner merely reiterated the missing elements found in Tozzoli but without stating the desirability to combine. Neither of these references includes any suggestion to combine its features with the features of the other reference.

15

Our claim is a direct real time purchase of a cargo option and not involving a funder as in Tozzoli or advancement and debit/credit book entry as in Hunt. As we mentioned, why would one skilled in the art see it more desirable to use a funder system when the payment can be done directly as requested by purchaser without an intermediary such as a funder to verify the documents. It can be clearly seen the problems faced by Tozzoli in international trade is much more complex than our simple need here for payment. Also refer to our detailed rebuttal under "Motivation to combine with Tozzoli" in page 13

20

25

Secondly why would Hunt desire to see a direct purchase of contracts as in our claim rather than using credits and debits to net payment at the end of the period. The capital advancement as taught is to ensure obligations are met and to limit credit risk positions with open contracts against the clearing house (exchange).

30

We disagree where the examiner asserted that Hunt shows cargo option being bought or sold. As we mentioned Hunt taught of his derivatives being one of a cargo future/forward contract and while derivative is known in the art of financial derivatives to inherently includes options, swaps, warrants, hybrids such as swap options, digital options, interest rate swaps, caps, floors, forward rate agreements (FRA), interest rate basis swaps, interest rate options, switches, FX options, at-the-money forward option (ATM), barrier options, quanto options etc such 'derivatives' however may not show cargo option.

35

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This is to say, if we allow the examiner's unstated assertion to stand then a forward contract well known in the financial art would also reveal cargo forward contract and Hunt's invention would be anticipated and unpatentable. Furthermore, no motivation is shown by the examiner to show why Hunt would modify an obligatory contract (futures) to non-obligatory as in a cargo option.

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Therefore, we respectfully submit that this claim should be allowed as it also includes limitations in Claim 29 wherein it depends and on its own merit being not obvious to Hunt's cargo forward contracts.

5

As per Claim 31

This rejection is respectfully traversed.

10

In claim 31 which is dependent on Claim 29, the examiner asserted that Tozzoli teach the funds transfer, bank accounts and password protection but said did not teach using cargo option for remaining payment purposes, reading the claim as a whole. The motivation provided is not sound as it does not address why one skilled in the art would find it desirable to combine. The examiner merely stated that one prior art describes database and the other bank/payment details part of the user's account. As we mentioned this merely shows combining two features but does not specifically address the desirability of the combination.

15

20

The motivation therefore picks on the missing elements found such as bank accounts data, fund etc and database connected to controller to reveal the limitations but not the desirability to do so in view that Tozzoli's trade financing method is payment for goods and services using LC or Bill of Lading backed by funder. As for rebuttal for motivation to combine, we submit our previous rebuttal in motivation to combine with Tozzoli at page 13.

25

Neither Tozzoli or Hunt has teaching for using cargo options for cargo space settlement by paying remaining payment.

30

We disagree where the examiner asserted that Hunt shows cargo option being settled by paying the remaining payment. Settlement of a cargo option occurs when user wants to take delivery of the underlying space which is non obligatory unlike a futures contract. Even if a futures contract is similarly being used to take delivery of the underlying space that by itself does not reveal it is an cargo option contract for the purpose of settling remaining payment to secure cargo space as it is obligatory. A cargo option has two payments, the first being the cargo option price paid when purchasing the cargo option and the remaining payment is paid on taking delivery of the cargo space. In Hunt's future/forward contract there is only one price, one payment for the whole contract to take delivery in the future. Similarly in Tozzoli only one payment is made by funder. The question is whether it would be obvious to show the second or remaining payment and the non-obligatory feature? Here the examiner provided no evidence nor motivation addressing this desirability.

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Therefore, we respectfully submit that this claim should be allowed as it also includes limitations in Claim 29 wherein it depends and on its own merit being not obvious to Hunt's cargo future/forward contracts' settlement in view to Tozzoli's method.

5

As per claim 50 and 53

This rejection is respectfully traversed.

10 Claim 50 is dependent on Claim 49 and Claim 53 is dependent on claim 50. We will use Claim 50 as the representative here in our rebuttal as the difference between the two is one of different class.

15 Claim 50 shows settlement using the cargo option which is not shown by Hunt as mentioned previously. Therefore the elements of "using cargo option to settle remaining payment" is not found in Hunt. Hunt defined derivative as a cargo future/forward contract not a cargo option contract. The distinguishing feature between future/forward and option is the non-obligatory feature found in the later. No evidences have been shown to show this feature is obvious in futures/forward contract nor any motivation to modify.

20

The motivation provided picks on the missing elements found such as bank accounts data, fund etc and database connected to controller to reveal the limitations but not the desirability to do so in view that Tozzoli's trade financing method is payment for goods and services using LC or Bill of Lading backed by funder. Here in our claim we have no funder, merely the need to settle remaining payment using cargo option not LC or Bill of Lading. How this trade finance instruments could reveal our cargo option settlement is another issue not shown by the examiner. Stated differently, how such instruments could be combined with forward contracts where settlements are taught to use contra or netting of difference is also not evidenced.

25

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Tozzoli teaches payment for goods between two distant parties using an intermediary (bank) common in trade financing art not using options to pay for said goods. In contrast, our claim is a cargo option owner settling the cargo option to take delivery of cargo space not funder or intermediary common in trade financing system whereby the contracted remaining payment is made through bank accounts. The fact that Tozzoli teach a cargo service provider and bank accounts by itself does not mean it is desirable to combine with an unknown financial derivative for cargo space settlement in particular wherein said having a remaining payment not found in trade financing instruments like Letter of Credits or Letter of Lading or futures contracts.

35

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Furthermore, there is no teaching of combining each other features. "[w]hen determining the patentability of a claimed invention which combines two known elements, the question is whether there is something in the prior art as a whole to suggest the

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desirability, and thus the obviousness, of making the combination." In re Beattie, 974 F.2d 1309, 1311-12, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992) (quoting Lindemann, 730 F.2d at 1462, 221 USPQ at 488). In particular reconciling one using contra and post billing while the other requiring a funder, both combination not revealing our need for remaining payment in settlement of cargo space.

Therefore, we respectfully submit that both claims should be allowed as they also include limitations in Claim 49 wherein both are dependent, our previous rebuttal in motivation to combine with Tozzoli at page 13 and on their own merit being not obvious to Hunt's cargo forward contracts' settlement method.

As per Claim 51

This rejection is respectfully traversed.

Claim 51 is dependent on Claim 49 which includes all its limitations which we have submitted as patentable. In this claim rejection, the examiner applied Chou's formulation method namely double auction to show our parametric elements not obvious in Hunt. The motivation provided shows Hunt describes the converting of the bid into a priced contract derivative while Chou et al details the method used by the computer to arrive at the price based on multiple different parameters including shipping information.

Firstly, the motivation is too general and conclusory as it could mean any number of prior arts showing said parameters is capable of combining and without more it does not address the need for said combination. Furthermore both Hunt's and Chou's method rely on matching buyers with sellers in an exchange environment. In this claim which is dependent on 49, we have no such element of matching and the parameters are used for pricing only. Our claim made it clear that our user is asking for a price by providing said parameters rather than waiting for match and said user cannot later provide a counter bid to the calculated price, making it obvious it could not mean be an exchange.

Secondly, since there is no evidence included in either references to combine its features with the features of the other reference. In particular, no evidence to show the price based on Chou is one suitable for a contract derivative based on Hunt.

The examiner produced no evidence to show in view of one skilled in the art, whether said calculating routine in Chou which happens to apply some of this parametric variables could actually modify Hunt's futures contracts to reveal one for pricing cargo option to reached our claimed invention reading limitation in 49 as well. By simply identifying these elements but without proving that said method can also result in a cargo option price (hence the desirability) does not appear to have satisfied the obviousness criteria.



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Therefore, we respectfully submit that this claim should be allowed as it also includes limitations in Claim 49 wherein it depends and on its own merit being not obvious to Chou's method being one of using said parameters missing in Hunt to maximising trade matches and not to determine a forward cargo price or where such combination is capable of arriving at cargo option price or calculating of said.

Also please refer to our detailed rebuttal at page 10 under "The motivation to combine with Chou"

As per Claim 54 in view to Hunt.

This claim relates to a 'classified' type of system where users can list secondary cargo options for sale. This rejection is respectfully traversed. Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference. See *B.F. Goodrich Co. v. Aircraft Breking Sys. Corp.*, 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed. Cir. 1996). Here the examiner provided no suggestion why one would modify Hunt to reach our claimed invention.

The examiner asserted that Hunt disclosed a network for selling existing cargo option and presented evidence from abstract, fig 1-2, col 4- lines 5-15. We do not agree that Hunt actually disclose selling existing cargo option contracts. There is no evidence to show a cargo forward contract will reveal a cargo option or alternatively a motivation to modify an obligatory contract to non-obligatory contract. Please refer to our page 5 under "Obviousness determination" for Hunt.

The examiner asserted that Hunt discloses " having a seller list existing cargo option in database for sale " and presented col 3, line 5-60, col 5 lines 45-60, col 6 lines 10-25, col 8 line 5-15) As mentioned, Hunt only disclosed cargo forward contracts.

The examiner asserted that Hunt discloses " buyer select cargo option and confirm selection " and presented Col 8 lines 25-30. We disagree, this evidence shows RDB program querying the transportation database which is not the same as user selecting the cargo option listed and confirming selection. In short, the program does the selection based on operator's submission of a bid to find the ask or a matching request. Here our user simply browse the listing submitted by others without having to use of a search program differentiating from Claim 29. Think of it as a 'special' deals prominent enough to attract user's interest at the outset.

The examiner asserted that Hunt disclose " notifying the cargo system of the cargo service provider of the selected cargo option" with evidence from Fig 1, col 11 lines 55-

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56. We disagree in particular there is no evidence to show a cargo system. The evidence shows exchange preparing contracts for forward sale from Fig 6B which is not the same as notifying the cargo system of the selected cargo option. In short, Hunt teaches making the contract ready for sale but in this element, the user has already selected the contract and notification is required for the carrier via cargo system.

Referring to "upon confirmation, performing payment transaction to credit the payment to the seller of the said cargo option and debit the account of the buyer"

- 10 For this particular element, specifying an existing option contract being sold, then logically the buyer must pay and seller must received payment at the instance of sale or upon confirmation of sale. Paying in full for the option is not the same as using contra common in an exchange or capital advance. The evidence in Hunt's path 1 in col 12 line 4 which describes a contra strategy where the net is calculated as a payment to settle the obligations in a futures/forward contract and hence this element has not been met by
- 15 Hunt as evidenced. To further illustrate this see our table below which also highlights the settlement differences between the two instruments.

20

	Our Claim element	Hunt's Path 1 at Col 12 Line 4 to line 16 and line 32 to 36
Time 0 (start)	User A buy an option and paid US 200 to cargo service provider in time 0 (Not shown in Claim 51)	User A contracts Future Contract at US 200
Time 1	As in claim 51, User A sell the same option to User B where User B pay User A US 210 in time 1	User A contra same Future Contract at US 210. As selling price is greater than purchase price, the net 10 is credit to User A and debit counter party.
Time 2 (expiry)	User B has to decide whether to pay remaining balance of option contract or abandons it. Remaining payment is made to cargo service provider directly.	Billing in respect of posted transactions. ( See Step 254) When payment is received from counter party, pay 10 to A.

- 25 The examiner stated "updating the database for seller, buyer and service provider's accounts to reflect the change in ownership and contractual rights " and provided evidence from Hunt ( Col 12, lines 30-36). We do not agree as the evidence points to updating the credit and debits for post billing and not on updating changes of ownership and contractual rights.

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As for the final element, transaction details being accessible, the examiner stated as per Hunt Col 5 lines 45-55 to show updating databases throughout the patent and that users can view entries made to the system. In particular this teaching refers to operator accessing to the system to input data, view matches available or receive notification of a match. What this means is 'transaction in progress' state as per Hunt and not updating data to reflected a completed transaction as in our claimed. In Hunt, new inputs are provided all the time so updating is required for RDB to see if these inputs are matched at any instance and to inform the operator, common in the mechanics of matching in an exchange.

The examiner provided the motivation as to provide fluid, efficient trading market. The motivation is too general and could cover almost any alteration contemplated by Hunt and does not address why this specific proposed modification would have been obvious. It is well known in the art that consummated trade data do not necessarily provide fluidity or promoting an efficient market.

Fluidity depends on the number of buyers and sellers gathering at any one time and their sale or purchase activities. A fluid market means players can buy and sell within a quicker time and acceptable trading ranges (hi-low) and spreads (ie difference between bid and ask) and sustainable volume. A market is said to be not fluid because there are limited players and hence marked differences between spreads and range. It can also mean that there are not many available floating stocks around for example if the majority are being kept by managed funds and are not traded frequently. None of these are related to past data or can be influenced by past data.

And efficiency means how market information is disseminated to players. Efficient market theory refers to perfect market, semi strong and weak form. Semi strong efficiency reflects our current stock market where some parties have privilege information before the market. Past or transacted data plays no role in any of these since past data are known to all and has no significant role in influencing market efficiency.

Past data are for information or record purposes and could not be used in promoting a market to be fluid or efficient. Random Walk theory had expressly sought to show past data plays no role in determining future prices although technical analysis practitioner would beg to differ. Furthermore, our cargo option transaction data are unique to the user's requirements unlike stocks/futures contracts which are standardized. For example one share of IBM stock is the same as another in the same class making it tradeable but user A requirements for cargo space is different to user B and hence each cargo option contract is unique and may not provide any meaningful predictive pricing elements either in terms of fluidity or market efficiency.

In contrast, Hunt's derivative is standardized by SEU based on category similar to stock type or class. Also note that our potential buyer in this claim could not offer a counter bid

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for the option as in Hunt's exchange. In short this claim is similar to an electronic classified rather than an exchange. Only in claim 29 where users can sell a secondary cargo option as it claims an exchange.

- 5 Even if it is well known in the art of exchanges to provide such information accessible to all users as the examiner suggested, the pertinent question is whether it is also well known to do so for cargo option commensated trades, the subject matter that is not obvious ?
- 10 We respectfully submit that this claim is patentable in view of Hunt in view of the cited missing elements above and for the reasons found in Obviousness determination at page 5 is herein incorporated.
- 15 As per claim 56 and 57.

- 20 Both rejections are respectfully traversed. As an initial matter, this claim is not claiming an exchange as in Hunt where bid/ask prices are matched. In this claim, it simply receive cargo pricing information and output a cargo option price without a need for matching as in Hunt. In Hunt the contracts are offered through an exchange mechanism and are posted independently to await matches. No bid can be submitted by our user and said user can only accept or reject an offered price.

- 25 We will use Claim 56 as the representative as claim 57 differs only in class.

- 30 Firstly there is no evidence in Hunt to show cargo option and neither did the examiner forward any reasons why one skilled in the art will find it obvious to read cargo options in a cargo forward both being different instruments. Furthermore, there must be particular showing why Hunt would modify an obligatory contract to non-obligatory, not obvious here. The word ' derivative ' is not particular as mentioned and could involve any number of permutations such as swaps or hybrid such as swaptions or combined with any types of commodities well known in the financial art. The question is whether one skilled in the art can pick 'cargo option' given that cargo option is not known else could one skilled in the art read cargo option from Hunt's derivative teaching. Nothing has been evidenced here by the examiner. Please also refer to our detailed rebuttal in Obviousness determination at page 5 is herein incorporated.

- 40 Secondly, we submit that Hunt did not teach connecting to a cargo system or having a cargo system. It may be well that Hunt teach of multiple points of input/output as evidence in Fig 1 but such a connected device in Fig 2 does not fairly teach what is known as a cargo system capable of determining availability of space in response to cargo shipping information from user and in return provide cargo information for

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calculating the cargo option price at host server. Hunt describes an exchange where any user can provide a listing, query and match including a carrier operator through said device in Fig 2 which is basically a general computer. While this general purposed computer has the means to be a cargo system but without more, it would not be obvious to convert given there is no teaching in Hunt. There must be objective teaching by Hunt to show this and to recognize that our cargo system automatically performs this function "if accepted by responding with cargo pricing information" on demand. The same cannot be said of a general PC depending on a human operator. The other evidence col 4 lines 5-15 reveals a network not cargo system and Abstract merely teach its derivative exchange with multiple input/output points.

Thirdly, in a listed exchange the prices are offered to ALL users on demand but here in our last element, this option price is offer only to the first user AND only when it is refused that such priced contract is offered to all. This reflects a certain priority in disseminating market information not found in Hunt. The examiner provided claim 4 items a-c as evidence in Hunt. This evidence describes accepting of a first listing for sale (a) and second listing for purchase (b) and matching both (c) which does not reflect our claim where the first user receives the option prices output from various responding cargo systems.

While item (a) resembles price output from our cargo system (space for sale), there is no item (b) where the user also provides a bid and there is no matching as the output prices are either taken or rejected by FIRST user and only if rejected then these are offered to all others. As we mentioned, our user could not provide a bid price since this price is dependent on cargo pricing data unknown to user. For example, it is doubtful the user would know the standard deviation of cargo prices which can only be found in cargo system. User provide shipping information including the remaining payment for cargo system to determine if they are acceptable. In response, the cargo system simply provides cargo pricing data to enable central controller which ultimately churns out the option price for consideration by user. Also note that cargo option price is calculated in response to cargo pricing information not found in Hunt or Chou since both bid/ask are posted independently. Claim 56 is a method claim requiring this response limitation while Claim 57 requires the cargo system limitation not evidenced by the examiner as mentioned.

As there is no cargo system in Hunt or Chou or Tozzoli and while there is a network for input devices as evidenced ( Hunt, Abstract, Fig 1,2. Col 4 lines 5-15) but none of them articulate the need for a cargo system as per our specification but merely PCs (Fig 2) and without more, we submit it does not fairly teaches cargo system as mentioned above.

If we allow such unstated alternatives by reading a PC to be any permutations, then it may be an airline reservation system, a shipping system, a payment processor etc which is not the standard for obviousness fact finding determination. There must be clear and particular evidence.

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Furthermore, both set of data are not matchable as in bid/ask trades but are consolidated by central controller to reach the option price.

5 In short, our output provides 'ASK' cargo option price calculated based on user's shipping inputs and the responsive cargo system's pricing data. There is no requirement for matching as taught in both Hunt and Chou.

10 Our user cannot subsequently provide a bid price to try to match the asking prices in response, which is the essence of Hunt's exchange's matching RDB (Col 8, line 14) and Chou's auction routine to optimize trade requiring bid/ask in an exchange (Fig 1).

15 Since, our user can only accept or reject what is given so we respectfully submit the items (b-c) in Claim 14 do not reveal our this claim element. Without 'matching' or user submitting a 'bid' means these elements have not been met by examiner's evidence.

Furthermore, the motivation is one similarly provided to combine with Chou where the examiner tried to use Chou's method to meet the said shipping parameters. Therefore, we submit our previous rebuttal under motivation to combine with Chou at page 10.

20 However, for the record, we must note that in claims 56, 57, we did not show any of the particular elements comprising shipping information so we are unsure why the examiner prosecuted them by evidencing Chou. The claimed element merely states "receiving shipping information from a user..."

25 Alternatively since Hunt only describe originating a future/forward contract, one skilled in the art would not combine with Chou knowing what is known in Chou to optimize trade matches has no relevance in revealing future price determination. There is also nothing in Hunt suggesting using Chou's feature by applying parameters to determine its future/forward price which expressly taught away from Hunt's estimation method. In  
30 sum, reading the claim as a whole the subject matter "calculating cargo option" has not be evidenced to be obvious. In short even before one skill in the art can arrive at calculating, he must also arrive at cargo option at the outset which is not evidenced even by reading 'derivative' since as we mentioned includes a number of permutations including swaps which has no calculation known in the general art. Therefore, the only  
35 possibility left is that impermissible hindsight was used.

We respectfully submit that this claim 56 and 57 being differently only in respect to the class should be patentable over Hunt in view of Chou for the reasons cited above.

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Our Response to the examiner's non functional issue.

5 We are uncertain as to the examiner's para 6 on page 6 citing Re Gulack (703 F.2d 1381, 1385, 217 USPQ 401,404 ( Fed Cir 1983)). The examiner did not state whether this is a question, objection, comment or rejection. The examiner stated "Nonfunctional descriptive material cannot render nonobvious an invention that would have otherwise been obvious". We beg to disagree as the above assertion is not relied by us. We have  
10 shown for all the rejected claims as above to be unobvious without reliance on nonfunctional descriptive material to rebut obviousness. The issue here is that mainly Hunt has no teaching of cargo option and no motivation was shown to modify thus by the examiner. In Chou, the combination is not workable simply because there is no teaching to combine with a calculation in Hunt that fails to show pricing cargo option and in  
15 Tozzoli, there is no suggestion to combine each other feature one being in trade financing using a funder and Hunt relying on contra to settle its obligations.

The examiner did not state or show which of the materials/elements are non functional or how it is so not related to substrate. The examiner cited no reasoning in analyzing the  
20 relevance of the lack of a functional relationship, or of the status of the 'descriptive data' as non-statutory subject matter, to its decision not to accord the printed matter patentable weight. Merely attempting to state is not evidence. Assuming these non functional data are the various parameters used for calculating our cargo option price, from our own analysis only Claims 29 and 51 shows them. Claim 51 is dependent on Claim 49 which  
25 by itself does not show said parameters. As mentioned, we have amended Claim 38. The examiner had asserted 14 claims in violation being those rejected as above. In Claim 29, we did not rely or even rebutted using any of these parameters, in fact the failure of a motivation to combine with Chou is sufficient or alternatively Hunt is not obvious to show cargo option as it lacks a motivation. In Claim 51 which must be read with  
30 limitations in Claim 49, we also did not rebut applying said parameters as it was sufficient again to show Chou could not be used as a reference to combine.

Turning to the examples cited, these also do not applied to any of our claims, there is no music or literary work encoded on the medium as per the first cited example. In our  
35 specification, the claimed descriptive data is significant because they provide patentable distinction and are not merely data being stored having no functionality. The data plays a vital role in the distinguishing features of the invention being used to perform the steps to query cargo system throughout including calculation revealing a cargo option price as we will discuss below.

40 The examiner cited the authority of Gulack stating "where the printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the prior art in terms of patentability ". Actually this principle as restated in Gulack

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was apparently from quoting Miller, 418 F.2d 1392, 164 USPQ 46 being used to advance the Board's decision. Miller involved an appeal from the board's affirmation of the rejection of claims drawn to a measuring device for use in fractioning recipes. No statutory ground for the rejection was specified. The rejection in Miller was on the basis that the invention lacked "the required cooperative structural relationship necessary before the printed matter can be given patentable weight." Id at 1393, 164 USPQ at 48. In fact in Miller, functionality was found for the applicant but only after defining functionality of the precise type found by the CCPA in Miller involving to size or to type of substrate, or conveying information about substrate. However, in Gulack, the majority has stated that such precise functional relationship is not required.

Pertinent in the cited case "Gulack", the Patent Office rejected the claims as obvious in view of the prior art, reasoning there was no functional relationship between the printed digits and the band supporting the digits. On appeal which is the subject of the cited case, the Federal Circuit reversed stating as follows:

"Differences between an invention and the prior art cited against it cannot be ignored merely because those differences resides in the content of the printed matter. Under 103, the board cannot dissect a claim, excise the printed matter from it, and declared the remaining portion of the mutilated claim to be unpatentable. The claim must be read as a whole."

The Federal Circuit also noted that printed matter may well constitute structural limitations on which patentability can be predicated ( id, 217 USPQ at 403)

In addition, the Court stated a general rule as to when printed matter will be afforded weight:

"What is required is the existence of differences between the appealed claims and the prior art sufficient to established patentability. The bare presence or absence of a specific functional relationship, without further analysis is not dispositive of obviousness. (id, at 404)"

In our case, as we mentioned, the examiner did not expressly state what are non functioning descriptive data so effectively we are left with limited opportunity to rebut the unstated. The examiner did not identify the substrate in view of Re Gulack which is an endless band.

However if one is to assume these to be the various input variables (shipping and pricing data) needed to calculate the cargo option price then we respectfully object as those data are manipulated in the memory to calculate the option price and they are uniquely functional to each other in the formulation by electronic signal manipulation (ie one set of signal transform to another). Neither are they "Printed Matter " as per Gulack. The only



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output is the price ( a different signal from original) as shown on the terminal in order for user to determine to purchase or not.

- 5 In contrast, music data on a CD, the CD being the substrate claimed would be printed matter if the only difference is the data itself to distinguish a prior art of another music CD. The identification of the substrate is important as the data is related to the substrate or article of manufacture. In claim 29, we refer to an apparatus and 51 is a method. So relevant here would only be claim 29 where printed matter could be stored in a database.
- 10 Our initial data are not printed matter since input shipping data will determine whether cargo system will response with cargo pricing data whereby said data will manipulate controller to provide cargo option price. At each stage the data is transformed to a different electric element to enable some function. This means the shipping data will reconfigure the cargo system to query and to determine availability of service and to perform cargo pricing data. Therefore, the first set of shipping data would affect how
- 15 cargo system will response. The pricing data in response output are used to manipulate the host to achieve the utility of the invention by calculating the cargo option price and will further reconfigured the machine to allow user to accept the price etc. Our data does not get stored in the database unless it becomes a completed transaction, however this
- 20 stored data is only reflective of the transaction details rather than the initial input data or cargo pricing data in response.

- In short, shipping data are manipulated to pricing data and in turn cargo option price. This signifies an order of execution of input and output sufficient to interact with substrate
- 25 (computer) to distinguish printed matter such as data stored in a database or CD which do not interact with another. The shipping data would interact with cargo system (substrate) to output another set of data and in turn interact with host (substrate) to output price to user via terminal. Therefore, the differences are not merely the labeling of data as a matter of design choice but how these data are used to configure the system to perform
- 30 some tasks to output another set of data.

- If we use music data or bid/ask data as per Chou or forward ask/bid in Hunt, we are doubtful if these can reconfigure the system to output a cargo option price. Lastly, it is evident that the examiner tried to combine Chou with Hunt to show our claims clearly
- 35 shows that the difference is not merely one of labeling the data but they are functional.

- In Chou, some of the data is used for double section routine while in our claim to calculate an option price both performing two different functions which the examiner has recognized, by stating " Chou details the method used by the computer to arrive at the price based on multiple different parameters including shipping information " (Action
- 40 Letter Page 4, last line, emphasis added ). In short, if Chou's computer uses these parameters to do something to arrive at something then surely these data must be functional as said data affects the workings of the computer by matching.

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5 As for the third 'common situation' with reference to a process that differs from the prior art with respect to non functional descriptive material that cannot alter how the process steps are to be performed, we respectfully submit that shipping data do alter the process steps given that if they are unacceptable, cargo system will not response or response in negative. This means no option price will be calculated. This is clearly stated "if service is available said cargo system responding means to provide cargo pricing information to central controller." at Claim 29. We are doubtful any music data will provide such functionality being performing a test first to suit listener's taste before playing. In contrast, Hunt has no teaching of calculating a cargo option and Chou method reveals a double auction routine to arrive at the optimal bid price which as we submitted differs from a cargo option price.

10 Finally recapping on Re Gulack, in a footnote, the same court expressed some impatience with the use of the printed matter doctrine as a basis for rejection under Section 103 (Id at 403 at n.8)

Footnote 8 as below:

20 "A printed matter rejection under 103 stands on questionable legal and logical footing. Standing alone, the description of an element of the invention as printed matter tells nothing about the difference between the invention and the prior art or about whether that invention was suggested by the prior art. A printed matter rejection is based on case law antedating the 1953 patent act, employing a point of novelty approach... The 1952 Act

25 legislatively revised that approach through its requirement that the claim be viewed as a whole in determining obviousness."

We therefore respectfully submit that our 'descriptive material' is functional and non obvious in view of Hunt and Chou.

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**Declaration 37 CFR 1.132**

5

10 I hereby declare that all statements made herein of my own knowledge are true and that  
all statements made on information and belief are believed to be true; and further that  
those statements were made with the knowledge that willful false statements and the like  
so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18  
of the United States Code, and that such willful false statements may jeopardize the  
15 validity of any application, any patent issuing thereon, or any patent to which this verified  
statement is directed.

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**Khai Hee KWAN**

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P.O.Box 1178  
Sandakan 90713  
Sabah, Malaysia

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#### Appendix I

#### MARKED VERSION

Without conceding the validity of the examiner's argument or the undemonstrated prima facie, and to expedite prosecution of the application, the claims are hereby amended as below and we respectfully seek the examiner's permission to add the following amendments 29,38,49,56:

29. (Currently Amended) An interactive electronic cargo option exchange for cargo service providers to manage cargo freight fees between registered users and cargo service providers by electronically determining the price for cargo option and for existing cargo option to be sold, bought and settled comprising:

a central controller including a CPU, database and a memory operatively connected to said CPU;

at least one service provider's cargo system including a CPU and a memory operatively connected to said CPU, said cargo system adapted for communicating with said central controller over a network;

said memory in said cargo system containing a program means for calculating, selecting, and responding adapted to be executed by said cargo system's CPU;

a plurality of terminal devices, adapted for communicating with said central controller, for transmitting to said central controller user cargo shipping information comprising at least: remaining payment, destination of cargo, arrival date of cargo, flexibility of arrival date, type of cargo, departure date, departure location and route criteria over a network;

wherein said cargo system calculating means uses at least, remaining payment, time period to provide service, current cargo service cost for a selected route to determine the base price, calculating standard deviation of cargo service price;

wherein said cargo system selecting means uses at least, destination of cargo, arrival date of cargo, flexibility of arrival date, type of cargo, departure date, departure location, weather conditions, loading capacity, demand for this type of cargo space, timing issues, cargo price and route criteria to determine availability of service;

if service is available said cargo system responding means to provide cargo pricing information to central controller;

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said memory in said central controller containing a program to calculate cargo option price, adapted to be executed by said CPU in response to cargo pricing information from cargo system;

- 5 wherein said central controller receives said user shipping information criteria from said terminal and query at least one service provider's cargo system over a network;

- 10 wherein said central controller is connected to a database comprising users account information, including past transaction records of any sale and purchase of cargo option, cargo prices, user personal details including banking accounts, transaction amounts, type of cargo, transporter, departure destination, arrival destination, said accounts are protected by passwords and login sequence; and

- 15 said central controller having searching means to match and rank existing cargo options set by user, means to display with a graphic user interface and means to receive a user request input via said terminal an offer for sale or buy cargo option, and means to receive cargo system request which are posted for a predetermined period accessible online to other users, in said exchange. *d*

- 20 *R* 30. (Previously Presented) The exchange according to claim 29, wherein said program in said central controller's memory means to receive a user request input via said terminal device to perform a payment transaction through a nominated bank account to sell or buy the posted cargo options on behalf of said user.

- 25 *R* 31. (Previously Presented) The exchange according to claim 29, wherein said program in said central controller's memory means to receive a registered user request input via said terminal device to settle user's cargo option contract and further means to perform a payment transaction through a nominated bank account to pay cargo service provider the remaining payment to secure the underlying contracted cargo services and further means to update both registered user's and service provider's accounts in the database.

- 30 *NA* 32. (Previously Presented) A method for cargo service providers to request a cargo option, the method comprising the steps of:

- 35 receiving a request comprising cargo pricing information from cargo system over a network;

- 40 executing a program to calculate the cargo option price that gives the cargo service provider the contractual right but not obligation to sell within a future period said period equal or less to the period before the departure date, the underlying cargo shipping services for a particular route to the seller of said option at a particular price; and *d*

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posting the cargo option price to await user's response where such offer(s) are open to all users for a predetermined period,

- 1 33. (Previously Presented) A computer implemented system for determining cargo option  
5 price for freight services over a network connected to a central controller linked to a plurality of terminals comprising:

at least one cargo system ;

- 10 having a CPU in service provider's cargo system;

having a memory in cargo system means connected to said CPU, said memory means containing a program adapted to be executed by said CPU;

- 15 having said CPU and memory in cargo system means to determine cargo pricing information, determining suitability of the shipping information inputted by user and means to response cargo pricing information to central controller having a CPU in the central controller;

- 20 having a memory in central controller means connected to said CPU, said memory means containing a program adapted to be executed by said CPU;

having said CPU and memory in response to cargo pricing information received from at least one cargo system , means electronically calculate cargo option price wherein  
25 calculate is based at least in part on the formula below;

*de* Cargo Option price -  $LC \cdot D \cdot L \cdot C \cdot R \cdot V \cdot W \cdot Q \cdot A \cdot CO$

- 30 where LC is the load capacity times the base price for the option, D is related to a desired number of weeks before departure date, L is concerning the cargo space demand on the requested route, C is concerning loyalty, R is concerning flexibility, V is concerning the standard deviation of the cargo prices, W is concerning the weather on the departure date, Q is for type of cargo including weight and dimensions , A is for type of carrier and CO is for number of competition on the same route; and

- 35 having said CPU and memory means outputting the cargo option price for consideration by user and update the database where said cargo option is available for predetermined period to other users if not selected by first user .

- 2 34. (Previously Presented) The system according to claim 33, wherein shipping  
40 information comprising at least one of the first information concerning destination of cargo, second information concerning arrival date of cargo, third information concerning

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departure location, fourth information concerning departure date, fifth information concerning flexibility of arrival date and sixth information concerning type of cargo.

3. 35. (Previously Presented) The system according to claim 33, wherein said cargo pricing information comprising: first information describing a number of weeks before departure, second information concerning the demand of this type of cargo space, third information concerning the standard deviation of the cargo prices for the route, fourth information on the current cargo price, fifth information on the flexibility of the cargo arrival date, sixth information on the loading capacity of the transporter, seventh information on the predicted weather prevailing on the date of departure and arrival, eighth information on the timing of the transporter, ninth information on the type of cargo, tenth information on the type of transporter selected, eleventh information on the route, twelfth information on the remaining payment.

15 36. (Previously Presented) The system according to claim 33, wherein central controller is an electronic cargo option exchange and whereby cargo is serviced by air, rail, sea or space carriers.

20 37. (Previously Presented) The system according to claim 33, wherein the said program in said memory in central controller comprising:

means to receive a user request to settle user's cargo option;

means to verify the validity of the cargo option;

means to perform a payment transaction to pay remaining payment to the cargo service provider responsible for providing the cargo service; and

means to update the database to reflect the payment in settlement for cargo service in both user and cargo service provider's accounts.

NA 38. (Currently Amended) A method for user to electronically determine a cargo option price, the method comprising the steps of:

35 receiving inputs that affect the price of a cargo option from user and cargo system;

calculating cargo option price by applying a cargo option formula satisfying said inputs;

output cargo option price to user; and

whereby cargo service is by air, sea, rail or space transportation;

using a central controller having a CPU and memory means;

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having a program stored in the memory means;

5 inputting departure date, arrival date, destination, departure location and remaining payment;

inputting type of cargo and flexibility of arrival date and route criteria information provided by a user;

10 querying a plurality of carrier cargo systems based on user's input;

if accepted by cargo system response with cargo pricing information to central controller and;

15 in response to cargo pricing information, for each responding cargo system calculating the cargo option price that gives the user the contractual right but not obligation to secure within a future period said period equal or less to the period before the selected departure date, the underlying cargo shipping services for a particular route, for a particular service which satisfied the user's shipping information and the cargo pricing information  
20 provided by corresponding cargo system by having the CPU execute said program;

outputting cargo option price to the user and update the database where said priced cargo option is available for predetermined period to other users if not selected by first user;  
25 and

whereby cargo shipping services is by air, rail, sea or space transporters,

6. 39. (Previously Presented) A method for determining cargo option for freight services over a network connected to a central controller linked to at least one service provider cargo system and a plurality of terminals, comprising the steps of:

30 at the central controller;

35 in response to cargo pricing information received from provider's cargo systems; calculating the cargo option price wherein said calculating is based at least in part on the formula below;

Cargo Option price =  $LC \cdot D \cdot L \cdot C \cdot R \cdot V \cdot W \cdot Q \cdot A \cdot CO$

40 where LC is the load capacity times the base price for the option, D is related to a desired number of weeks before departure date, L is concerning the cargo space demand on the requested route, C is concerning loyalty, R is concerning flexibility, V is concerning the standard deviation of the cargo prices, W is concerning the weather on the departure date,



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Q is for type of cargo including weight and dimensions, A is for type of carrier and CO is for number of competition on the same route; and

5 outputting the cargo option price to the user and update the database where said priced cargo option is available for predetermined period to other users if not selected by first user.

7. 40. (Previously Presented) The method according to claim 39, includes the step of  
10 receiving user's cargo shipping information comprising at least one of the first information concerning destination of cargo, second information concerning arrival date of cargo, third information concerning departure location, fourth information concerning departure date, fifth information concerning flexibility of arrival date, sixth information concerning type of cargo and seventh information concerning route criteria provided by a user, and

15 a step querying at least one cargo system with said user's shipping information.

8. 41. (Previously Presented) The method according to claim 39,  
20 wherein cargo pricing information comprising: first information describing a number of weeks before departure, second information concerning the demand of this type of cargo space, third information concerning the standard deviation of the cargo prices for the route, fourth information on the current cargo price, fifth information on the flexibility of the cargo arrival date, sixth information on the loading capacity of the transporter,  
25 seventh information on the predicted weather prevailing on the date of departure and arrival, eighth information on the timing of the transporter, ninth information on the type of cargo, tenth information on the type of transporter selected, eleventh information on the route, twelfth information on the remaining payment.

30 9. 42. (Previously Presented) The method according to claim 39, further comprising:  
the steps of receiving an indication that a user has purchased or sold the cargo option;  
updating a customer database to record the sale or purchase of the cargo option; and  
35 posting transaction details accessible by all users.

10. 43. (Previously Presented) The method according to claim 39, further comprising the step of:

40 receiving a user's request in the form of shipping information to purchase an existing cargo option;

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scanning for any other ready seller matching at that price or lower in cargo option database accessible to all users;

- 5 if available, performing a payment transaction through a nominated bank account by electronic instructions connected to the bank to pay the seller;

storing information regarding said cargo option contract until expiry or settled which ever is first in the contracted parties respective accounts; and

- 10 posting the transaction details which is accessible to all users over the network.

- 11 44. (Previously Presented) The method according to claim 43, wherein the step of receiving shipping information comprising: receiving the range of possible dates of departure, destination, departure location, dates of arrival, range of possible settlement price or remaining payment, type of cargo and flexibility of arrival dates for this route  
15 criteria, range of cargo option prices acceptable and a selection of cargo service providers.

- 12 45. (Previously Presented) The method according to claim 39, further comprising the  
20 steps of:

receiving a user's request to settle user's cargo option;

25 verifying the validity of the cargo option;

if verified ask user to perform a payment transaction to pay remaining payment to the service provider responsible for providing the cargo service;

- 30 updating the database to reflect the settled cargo service in both the said user's and service provider's accounts; and

posting settlement details accessible to all users over the network.

- 13 46. (Previously Presented) The method according to claim 39 whereby the central  
35 controller is an electronic cargo option exchange.

47. (Previously DELETED)

- 14 48. (Previously Presented) A computer-readable medium storing computer executable  
40 program implementing the method of claim 39.

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NA 49. (Currently Amended) A method of electronically originating, pricing and purchasing a cargo option from at least one cargo system connected to a central controller over a network, comprising the steps of:

5 inquiring the cargo option price by providing shipping information to at least one cargo systems via central controller over a network by user;

determining suitability of shipping information by cargo systems;

10 in response to cargo pricing information received by central controller calculating cargo option price(s) at central controller;

outputting the cargo option price(s) for consideration by the user;

15 receiving an offer by user to purchase the cargo option satisfying said shipping information over a network; and

initiating payment instructions to respective banking accounts of buyer and seller to credit the seller and debit the buyer;

20 upon confirmation of payment, updating both buyer and seller accounts;

updating cargo option database where cargo option data is available to other users; and

25 whereby cargo is serviced by air, rail, sea or space carriers.

NA 50. (Previously Presented) The method according to claim 49, further including the step of using said cargo option to settle remaining payment to secure the cargo service with the particular cargo service provider.

30 NA 51. (Previously Presented) The method according to claim 49, wherein said step of providing shipping information comprising: destination of cargo, arrival date of cargo, departure date, departure location, flexibility of arrival date, type of cargo, remaining payment, and route criteria over the network via a terminal device.

35 NA 52. (Previously Presented) A network system implementing the method of claim 49.

NA 53. (Previously Presented) A network system implementing the method of claim 50.

40 NA 54. (Previously Presented) A network system for selling an existing cargo option between one user to another user over a network, comprising:

a central controller adapted to implement the steps of:

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having a seller list existing cargo option in database for sale ;

having a buyer select the cargo option and confirm selection;

5

upon confirmation, performing payment transaction to credit the payment to the seller of the said cargo option and debit the account of the buyer;

10

notifying the cargo system of the cargo service provider of the selected cargo option; updating the database for seller, buyer and service provider's accounts to reflect the change in ownership and contractual rights ; and

updating the database with the transaction details accessible by all users online.

15 NA 55 (Previously Presented) A computer system for cargo service provider to manage cargo space by implementing the method of Claim 32.

NA 56. (Currently Amended) A method for cargo service provider to electronically offer a cargo option, the method comprising the steps of:

20

receiving shipping information from a user;

querying at least one carrier cargo system based on user's input;

25 if accepted by cargo system response with cargo pricing information;

in response to cargo pricing information, calculating the cargo option price that gives the user the contractual right but not obligation to secure within a future period said period equal or less to the period before the selected departure date, the underlying cargo shipping services for a particular route, for a particular service which satisfied the user's shipping information and the cargo pricing information provided by corresponding cargo system;

30

outputting cargo option price to the user and update the database where said priced cargo option is available for predetermined period to other users if not selected by first user, and

35

whereby cargo shipping services is by air, rail, sea or space transporters.

40 NA 57. (Previously Presented) A system for cargo service provider to electronically offer a cargo option, the said system consisting at least one cargo system linked to a network implementing the method of claim 56.

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**Appendix 2- Extracted from US Pat 6,470,321**